

NiceZyme View of ENZYME: EC 1.8.1.7

Official Name	
Glutathione-disulfide reductase.	
Alternative Name(s)	
Glutathione reductase. Glutathione reductase (NADPH). NADPH-glutathione reductase. GSH reductase. GSSG reductase. NADPH-GSSG reductase. Glutathione S-reductase. NADPH:oxidized-glutathione oxidoreductase.	
Reaction catalysed	
2 glutathione + NADP(+) <=> glutathione disulfide + NADPH	
Cofactor(s)	
FAD.	
Comments	
<ul style="list-style-type: none"> Activity is dependent on a redox-active disulfide in each of the active centres. Formerly EC 1.6.4.2. 	
Human Genetic Disease(s)	
Hemolytic anemia due to glutathione reductase deficiency	MIM:138300
Cross-references	
PROSITE	PD0C00073
BRENDA	1.8.1.7
EMP/PUMA	1.8.1.7
WIT	1.8.1.7
Kyoto University LIGAND chemical database	1.8.1.7
IUBMB Enzyme Nomenclature	1.8.1.7
IntEnz	1.8.1.7
MEDLINE	Find literature relating to 1.8.1.7
Swiss-Prot	P42770, GSHC_ARATH; P27456, GSHC_PEA ; P48640, GSHC_SOYBN; Q43154, GSHC_SPIOL; P80461, GSHC_TOBAC; P48638, GSHR_ANASP; P48641, GSHR_ARATH; O04955, GSHR_BRARP; P48639, GSHR_BURCE; P30635, GSHR_CAEEL; P06715, GSHR_ECOLI; P43783, GSHR_HAEIN; P00390, GSHR_HUMAN; P47791, GSHR_MOUSE; P48642, GSHR_ORYSA; Q43621, GSHR_PEA ; Q15770, GSHR_PLAF7; Q94655, GSHR_PLAFK; P23189, GSHR_PSEAE; P78965, GSHR_SCHPO; P11804, GSHR_SPISP; Q60151, GSHR_STRTR; P41921, GSHR_YEAST;

View entry in original ENZYME format

If you would like to retrieve all the Swiss-Prot entries referenced in this entry, click [here](#).

=> a nls

(FILE 'HOME' ENTERED AT 12:48:32 ON 08 OCT 2003)

FILE 'REGISTRY' ENTERED AT 12:49:54 ON 08 OCT 2003
L1 1 S 9001-48-3/RN

FILE 'HCAPLUS' ENTERED AT 12:50:57 ON 08 OCT 2003

FILE 'REGISTRY' ENTERED AT 12:51:02 ON 08 OCT 2003
SET SMARTSELECT ON
L2 SEL L1 1- CHEM : 11 TERMS
SET SMARTSELECT OFF

FILE 'HCAPLUS' ENTERED AT 12:51:03 ON 08 OCT 2003

L3 7442 S L2
L4 1445 S L3 (L) (PEPTIDE OR PROTEIN OR POLYPEPTIDE)
L5 707 S L4 AND PD<19940713
L6 0 S L5 AND (CLOVER YELLOW VEIN VIRUS)
L7 0 S L5 AND (NUCLEAR INCLUSION)

=> s 9001-48-3/rn
L1 1 9001-48-3/RN
=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN

RN 9001-48-3 REGISTRY

CN Reductase, glutathione (9CI) (CA INDEX NAME)

OTHER NAMES:

CN E.C. 1.6.4.2

CN Glutathione disulfide oxidoreductase

CN Glutathione disulfide reductase

CN Glutathione reductase

CN Glutathione S-reductase

CN GSH reductase

CN GSSG reductase

CN NADP-dependent glutathione reductase

CN NADPH-glutathione reductase

CN NADPH-GSSG reductase

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,
CA, CABA, CANCERLIT, CAPLUS, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM,
EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, NAPRALERT, NIOSHTIC, PIRA,
PROMT, TOXCENTER, USPAT2, USPATFULL

Other Sources: EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

5868 REFERENCES IN FILE CA (1907 TO DATE)

22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5875 REFERENCES IN FILE CAPLUS (1907 TO DATE)